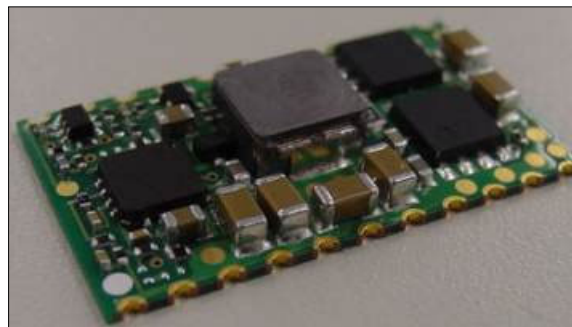


MPDTY301S/302S (7A-POL DC-DC Converter [Non-isolated])

■Features

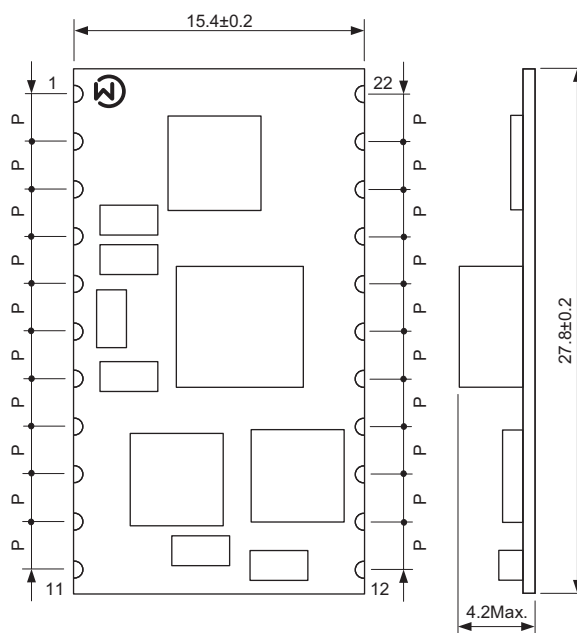
- No Derating (Air Flow Not Required)
- Smallest and Lowest Profile in the Industry
- Leadless Surface Mount
- High Efficiency (94% Typical)
- Wide Operating Temperature Range (-40 to +85 degreeC)
- On/Off Control Function
- Wide Input Voltage Range:
 - 4.5 to 5.5V (MPDTY301S)
 - 3.0 to 3.6V (MPDTY302S)
- Trim Function-Vout Range:
 - 0.8 to 3.3V (MPDTY301S)
 - 0.8 to 2.5V (MPDTY302S)
- Short Circuit Protection and Under Voltage Lockout Protection



■General Specifications (Ta=25 degreeC)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Input Voltage	Vin	MPDTY301S	4.5	5.0	5.5	V
		MPDTY302S	3.0	3.3	3.6	
Output Voltage	Vout	MPDTY301S	0.8		3.3	V
		MPDTY302S	0.8		2.5	
Output Current	Iout		0		7	A
Ripple Voltage	Vrip	Vin=5V, Vout=2.5V		30	50	mVpp
Efficiency	EFF	Vin=5V, Vout=2.5V Io=7A		94		%

■Dimensions



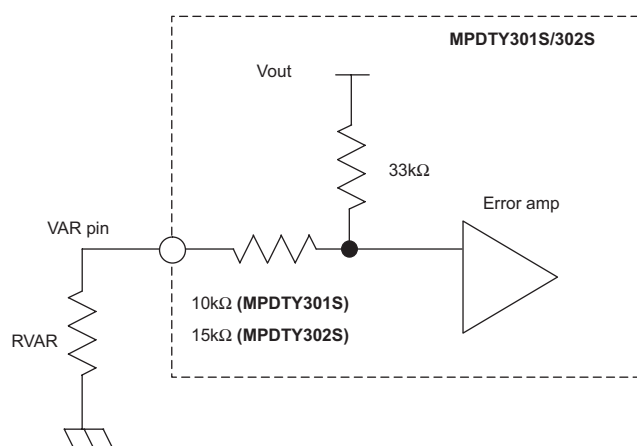
▲Note • Please read rating and ▲CAUTION (for strage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.
• This catalog has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

MPDTY301S/302S (7A-POL DC-DC Converter [Non-isolated])

Pin Number and Function

Pin No.	Signal	Function
1,2,3,4,5	Vout	Output Voltage
6,7,8,9,10,18,19,20,21	GND	GND
11	VAR	Output Voltage Trim.
12	On/Off	Remote On/Off
13,14,15,16,17	Vin	Input Voltage
22	N.C.	N.C.

Output Voltage Adjustment



• MPDTY301S

$$R_{VAR} = \frac{26.4}{V_{out} (V) - 0.8 (V)} - 10 (k\Omega)$$

• MPDTY302S

$$R_{VAR} = \frac{26.4}{V_{out} (V) - 0.8 (V)} - 15 (k\Omega)$$

<R Calculation Example>

MPDTY301S

Vout (V)	Calculated RVAR (Ω)	RVAR Example
3.3	560	560Ω
2.5	5,529.4	5.1kΩ+430Ω
2.0	12,000	12kΩ
1.8	16,400	16kΩ+390Ω
1.5	27,714.3	27kΩ+680Ω
1.2	56,000	56kΩ
1.0	122,000	120kΩ+2kΩ
0.8	∞	Open

MPDTY302S

Vout (V)	Calculated RVAR (Ω)	RVAR Example
2.5	529.4	510Ω
2.0	7,000	6.8kΩ+200Ω
1.8	11,400	11kΩ+390Ω
1.5	22,714	22kΩ+680Ω
1.2	51,000	51kΩ
1.0	117,000	100kΩ+18kΩ
0.8	∞	Open

▲Note • Please read rating and ▲CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.

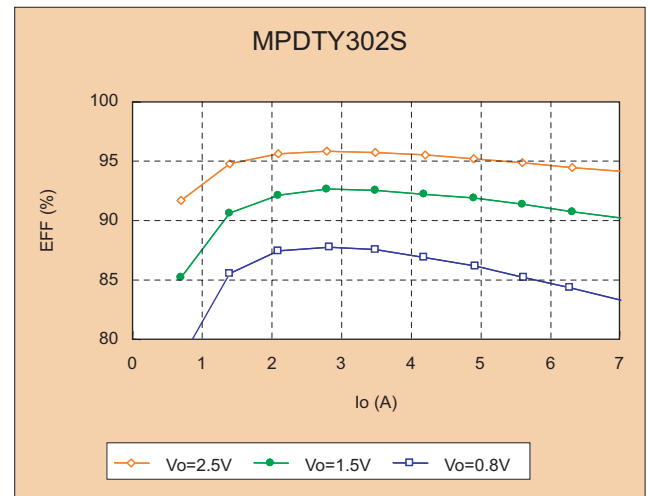
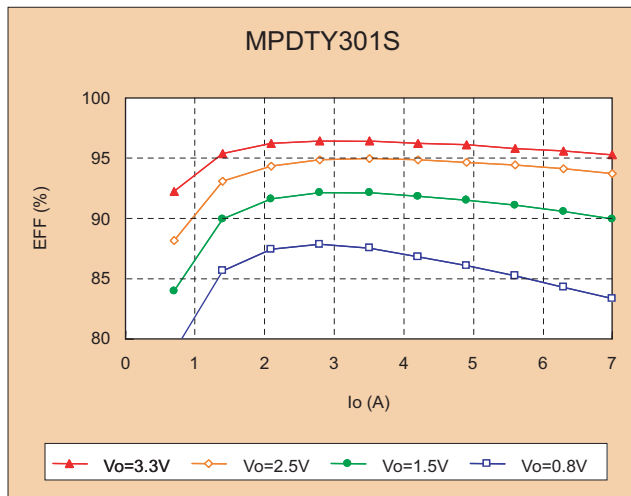
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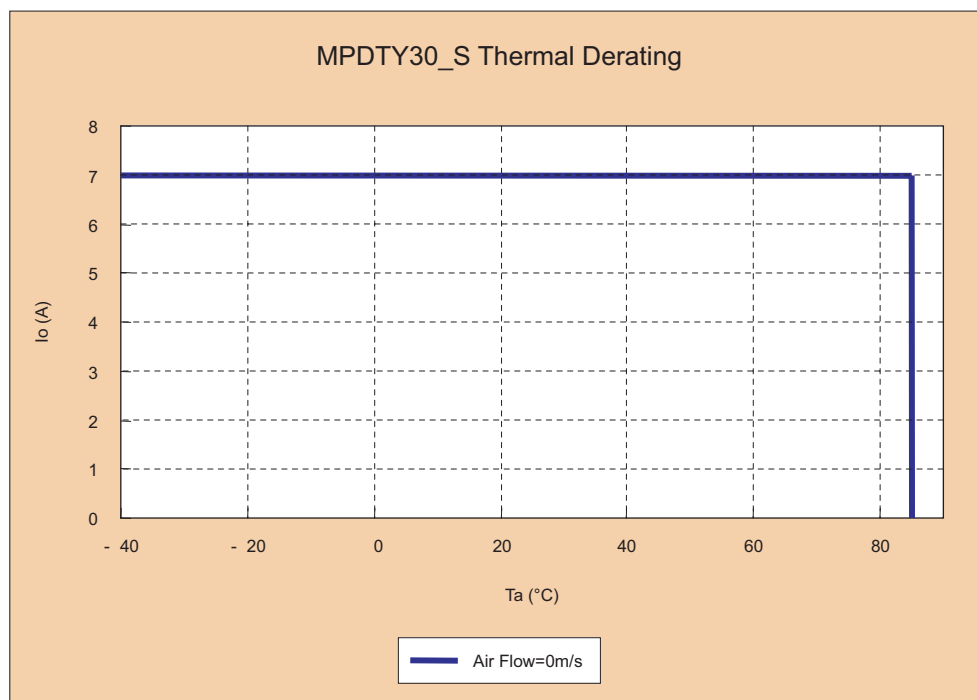
Murata Manufacturing Co., Ltd.

MPDTY301S/302S (7A-POL DC-DC Converter [Non-isolated])

■ Conversion Efficiency



■ Typical Power Derating



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